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FIT Clinical Decision Making

RIGHT HEART FAILURE FROM PERSISTENT IATROGENIC ATRIAL SEPTAL DEFECT FOLLOWING ATRIAL FIBRILLATION ABLATION

Poster Contributions
Hall C
Saturday, March 29, 2014, 3:45 p.m.-4:30 p.m.

Session Title: FIT Clinical Decision Making: Congenital and Electrophysiology
Abstract Category: Arrhythmias and Clinical EP
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Background: Persistent iatrogenic atrial septal defect (iASD) has been reported in patients with a transseptal puncture performed for access to the left atrium. Majority of these resolve spontaneously and their clinical significance remains unknown. Here, we report a rare case of a symptomatic, persistent iASD after repeated ablations that required percutaneous closure.

Case: A 67 year old female, with symptomatic paroxysmal atrial fibrillation (AF) and a normal echocardiogram, was referred for cryoablation. During the procedure, the inter-atrial septum was punctured twice with two 8-F sheaths. A15-F Cryo-sheath was then advanced into the left atrium and pulmonary veins isolated. The next day, an echocardiogram demonstrated a small inter-atrial left to right shunt. Over the next three months the patient continued to have episodes of paroxysmal AF and was brought back for radiofrequency ablation. An echocardiogram prior to the procedure, demonstrated mild RV dilation and stable shunt size. The inter-atrial septum was crossed through the ASD with two 8-F sheaths and pulmonary veins isolated. Within days post-procedurally, patient started experiencing increasing dyspnea on exertion (DOE) and fatigue. Physical exam showed evidence of right-sided failure.

Decision making: Initial workup with a Chest CT did not show PE or diaphragm paralysis. To workup the possibility of pulmonary vein stenosis and ASD, an echocardiogram and MRI was performed. This revealed moderate RV dilation, mild pulmonary HTN, large ASD (1.6 cm, Qp/Qs: 1.8) and no pulmonary vein stenosis. Furthermore, to evaluate her symptoms of DOE, a supine bicycle exercise echocardiogram (SBE) was performed. This demonstrated that with increasing watts, the inter-atrial shunt became worse and patient developed hypoxia. Based on these findings she had her ASD closed with a 24mm Amplatzer device. In the ensuing months, she reported resolution of symptoms and a repeat SBE showed no shunt

Conclusion: Persistent iASDs are becoming an increasingly common finding with increasing sheath sizes and repetitive transseptal punctures. As demonstrated, this can lead to a hemodynamically significant left to right shunt requiring closure.